

Operations with Square Roots (For use after Section 11-10)**Simplify. Leave no perfect square factor under the radical sign.**

1. $\sqrt{10} \cdot \sqrt{10}$ _____ 2. $\sqrt{2} \cdot \sqrt{14}$ _____

3. $\sqrt{3} \cdot \sqrt{12}$ _____ 4. $3 \cdot 2\sqrt{3}$ _____

5. $6\sqrt{3} \cdot \sqrt{3}$ _____ 6. $5\sqrt{6} \cdot 2\sqrt{2}$ _____

7. $\sqrt{x} \cdot \sqrt{9x}$ _____ 8. $4x\sqrt{5} \cdot x\sqrt{5}$ _____

9. $\frac{\sqrt{18}}{\sqrt{2}}$ _____ 10. $\frac{6\sqrt{35}}{2\sqrt{5}}$ _____

11. $\sqrt{\frac{3}{4}} \cdot \sqrt{\frac{8}{3}}$ _____ 12. $\sqrt{\frac{1}{18}} \cdot \sqrt{\frac{1}{2}}$ _____

13. $\frac{\sqrt{8x^2y}}{\sqrt{2y}}$ _____ 14. $2\sqrt{n^3} \cdot 4\sqrt{n}$ _____

Express in simplest form.

15. $\sqrt{\frac{1}{5}}$ _____ 16. $\sqrt{\frac{7}{8}}$ _____

17. $\sqrt{\frac{7}{12}}$ _____ 18. $\frac{4\sqrt{12}}{\sqrt{3}}$ _____

19. $\sqrt{\frac{n^2}{7}}$ _____ 20. $\frac{c^2}{\sqrt{c}}$ _____

21. $3\sqrt{2} + 4\sqrt{2}$ _____ 22. $6\sqrt{7} - \sqrt{7}$ _____

23. $\sqrt{12} + \sqrt{3}$ _____ 24. $\sqrt{20} + 3\sqrt{5}$ _____

25. $3\sqrt{8} - \sqrt{2}$ _____ 26. $\sqrt{7} - 2\sqrt{3} + 3\sqrt{7}$ _____

27. $\sqrt{5} - \sqrt{3} + 4\sqrt{3}$ _____ 28. $\sqrt{8} + \sqrt{12} + \sqrt{2}$ _____

29. $\sqrt{75} + 2\sqrt{5} + \sqrt{12}$ _____ 30. $\sqrt{4x} + \sqrt{x^3}$ _____